

## AMENDMENTS TO THE SPECIFICATION

Please replace the identified paragraphs with the following rewritten paragraphs.

## Paragraph beginning at page 3, line 15

Over the last few years, the Charged Particle Physics Branch (Code 6750) at the Naval Research Laboratory has developed a new plasma source called the Large Area Plasma Processing System (LAPPS). See U.S. patents 5,182,496 and 5,874,807 and the following articles for background material. Physics of Plasmas, 5(5), 2137-2143, 1998; Plasma Sources Sci. Technol, 9, 370-386, 2000; Journal of Vacuum Science and Technology A, 19(4), 1325-1329, 2001; Journal of Vacuum Science and Technology A, 19(4), 1367-1373, 2001; Physics and Plasma, 8(5), 2558-2564, 2001. All patents and articles cited above are incorporated herein by reference in their entireties. This device uses a magnetically confined, sheet electron beam to ionize a background gas and produce a planar plasma. Electron beams exhibit high ionization and dissociation efficiency of the background gas. In addition, the plasma production process is largely independent of the gas constituents and reactor geometry, allowing for both plasma and system optimization. Since the plasma volume is limited only by the beam dimensions, the usable surface area of these plasmas can exceed that of other plasma sources. In our laboratory, rectangular plasmas with a thickness of 1 cm and a width of 30 cm or an area of 60 cm x 60 cm and 1 m<sup>2</sup> have been produced. The electron beam can be generated from a linear hollow cathode, hot filament, or field emitting electron source.